```
1    ATGAGCTTCCTAGAGCAAGGAGAGAGCCGTTCATGGCCATCCCGAGCTGTAACCACCAGCTCAGAAAGAA
       M  S  F  L  E  Q  G  E  S  R  S  W  P  S  R  A  V  T  T  S  S  E  R
                                30
                                AcC
                                 T
71   GCCATGGGGACCAGGGGAaCAAGGCCTCTAGATGGACAAGGCAGGAGGATGTAGAGGAAGGGGGGCCTCC
       S  H  G  D  Q  G  N  K  A  S  R  W  T  R  Q  E  D  V  E  E  G  G  P  P
                         52
                         aGT
                          S
141  GGGCCCGAGGGAAgGTCCCCAGTCCAGGCCAGTTGCTGAGTCCACCGGGCAGGAGGCCACATTCCCCAAG
         G  P  R  E  G  P  Q  S  R  P  V  A  E  S  T  G  Q  E  A  T  F  P  K
211  GCCACACCCTTGGCCCAAGCCGCTCCCTTGGCCGAGGTGGACAACCCCCCAACAGAGCGGGACATCCTCC
         A  T  P  L  A  Q  A  A  P  L  A  E  V  D  N  P  P  T  E  R  D  I  L
281  CCTCTGACTGTGCAGCCTCAGCCTCCGACTCCAACACAGACCATCTGGATCTGGGCATAGAGTTCTCAGC
       P  S  D  C  A  A  S  A  S  D  S  N  T  D  H  L  D  L  G  I  E  F  S  A
351  CTCGGCGGCGTCGGGGGATGAGCTTGGGCTGGTGGAAGAGAAGCCAGCCCCGTGCCCATCCCCAGAGGTG
         S  A  A  S  G  D  E  L  G  L  V  E  E  K  P  A  P  C  P  S  P  E  V
421  CTGTTACCCAGGCTGGGCTGGGATGATGAGCTGCAGAAGCCGGGGGCCCAGGTCTACATGCACTTCATGC
         L  L  P  R  L  G  W  D  D  E  L  Q  K  P  G  A  Q  V  Y  M  H  F  M
491  AGGAGCACACCTGCTACGATGCCATGGCGACCAGCTCCAAACTGGTCATCTTCGACACCATGCTGGAGAT
       Q  E  H  T  C  Y  D  A  M  A  T  S  S  K  L  V  I  F  D  T  M  L  E  I
                                          199200
                                          aTCCaA
                                           I  Q
561  CAAGAAGGCCTTCTTTGCCCTGGTGGCCAACGGCgTCCgAGCGGCACCTTTGTGGGACAGCAAGAAGCAG
         K  K  A  F  F  A  L  V  A  N  G  V  R  A  A  P  L  W  D  S  K  K  Q
631  AGCTTCGTGGGGATGCTGACCATCACAGACTTCATCTTGGTGCTGCACCGCTATTACAGGTCCCCCCTGG
         S  F  V  G  M  L  T  I  T  D  F  I  L  V  L  H  R  Y  Y  R  S  P  L
701  TCCAGATCTACGAGATTGAAGAACATAAGATTGAGACCTGGAGGGAGATCTACCTTCAAGGCTGCTTCAA
       V  Q  I  Y  E  I  E  E  H  K  I  E  T  W  R  E  I  Y  L  Q  G  C  F  K
771  GCCTCTGGTCTCCATCTCTCCCAATGACAGCCTGTTCGAAGCTGTCTACGCCCTCATCAAGAACCGGATC
         P  L  V  S  I  S  P  N  D  S  L  F  E  A  V  Y  A  L  I  K  N  R  I
841  CACCGCCTGCCGGTCCTGGACCCTGTCTCCGGGGCTGTGCTCCACATCCTCACACATAAGCGGCTTCTCA
         H  R  L  P  V  L  D  P  V  S  G  A  V  L  H  I  L  T  H  K  R  L  L
911  AGTTCCTGCACATCTTTGGCACCCTGCTGCCCCGGCCCTCCTTCCTCTACCGCACCATCCAAGATTTGGG
       K  F  L  H  I  F  G  T  L  L  P  R  P  S  F  L  Y  R  T  I  Q  D  L  G
981  CATCGGCACATTCCGAGACTTGGCCGTGGTGCTGGAAACGGCGCCCATCCTGACCGCACTGGACATCTTC
         I  G  T  F  R  D  L  A  V  V  L  E  T  A  P  I  L  T  A  L  D  I  F
051 GTGGACCGGCGTGTGTCTGCGCTGCCTGTGGTCAACGAAACTGGACAGGTAGTGGGCCTCTACTCTCGCT
         V  D  R  R  V  S  A  L  P  V  V  N  E  T  G  Q  V  V  G  L  Y  S  R
1121 TTGATGTGATCCACCTGGCTGCCCAACAAACATACAACCACCTGGACATGAATGTGGGAGAAGCCCTGAG
       F  D  V  I  H  L  A  A  Q  Q  T  Y  N  H  L  D  M  N  V  G  E  A  L  R
1191 GCAGCGGACACTGTGTCTGGAAGGCGTCCTTTCCTGCCAGCCCCACGAGACCTTGGGGGAAGTCATTGAC
         Q  R  T  L  C  L  E  G  V  L  S  C  Q  P  H  E  T  L  G  E  V  I  D
1261 CGGATTGTCCGGGAACAGGTGCACCGCCTGGTGCTCGTGGATGAGACCCAGCACCTTCTGGGCGTGGTGT
         R  I  V  R  E  Q  V  H  R  L  V  L  V  D  E  T  Q  H  L  L  G  V  V
1331 CCCTCTCTGACATCCTTCAGGCTCTGGTGCTCAGCCCTGCTGGAATTGATGCCCTCGGGGCCTGAGAACC
         S  L  S  D  I  L  Q  A  L  V  L  S  P  A  G  I  D  A  L  G  A  *
1401 TTGGAACCTTTGCTCTCAGGCCACCTGGCACACCTGGAAGCCAGTGAAGGGAGCCGTGGACTCAGCTCTC
1471 ACTTCCCCTCAGCCCCACTTGCTGGTCTGGCTCTTGTTCAGGTAGGCTCCGCCCGGGGCCCCTGGCCTCA
1541 GCATCAGCCCCTCAGTCTCCCTGGGCACCCAGATCTCAGACTGGGGCACCCTGAAGATGGGAGTGGCCCA
1611 GCTTATAGCTGAGCAGCCTTGTGAAATCTACCAGCATCAAGACTCACTGTGGGACCACTGCTTTGTCCCA
1681 TTCTCAGCTGAAATGATGGAGGGCCTCATAAGAGGGGTGGACAGGGCCTGGAGTAGAGGCCAGATCAGTG
1751 ACGTGCCTTCAGGACCTCCGGGGAGTTAGAGCTGCCCTCTCTCAGTTCAGTTCCCCCCTGCTGAGAATGT
1821 CCCTGGAAGGAAGCCAGTTAATAAACCTTGGTTGGATGGAATTTGGAGAGTCG
```


Fig. 1

GAAACTCTTCTCCCCACA***GACTCCCTCCTGGAGCAGCCTCGGGGGACCTAAGC***
ATCAAGGTAGGTGGGGCTGCCCCTGCTCGCGGGCCCAGGCTCTTCTCCCACCT
CCTTTTCTTCCACGTCTTCAGGACCCCAATCTCCCCCACTCCACTCGCCTGGCT
CTTGTCTTCCTCTCCTTTGCCTTCTTTGTTCCGCTTTGTTTCTTCTTCCTCCCTCT
CCCTCACCTCCTCCCTCTTTCAAAAGAGTAGAGGGGGCATCTATAGAGTCTGG
AGATTGGGACTCTCTTGACTTTCTCGCTTACTAGCTGTGTGATTTGTGGC
AAATTGCTTCACCTCTCTGAGCTCAGGTCTCTCGTTAGTAAAACAGGGCT
GATAGCCATGCCCTTCGGATAAGATTGCCGTGAGGGTTGAATGAGAAATT
TGTTGGAGGACAAGCCCTTTGAAGCT**TCCCAATATTAAATATT**TTTATTT
ATTTATTTATTTTTTGTCTTTTTGCTATTCCTTTGGGCCGCTCCCACGGC
ATATGGAGGTTCCCAGGCTAGGGGTCGAATCGGAGCTGTAGCCACTGGCC
TACGCCAGAGCCACAGCAACGCGGGATCCGAGCCGCATCTGCAACCTACA
CCACAGCTCACGGCAACGCCGGATCGTTAACCCACTGAGCAGGGGCAGGC
ACCGAACCTGCAACCTCATGGTTCCTAGTGGGATTCGTTAACCACTGCGC
CACGACGGGAAC**TCCCCAATATTAAATATT**ATTATTAGTAACATTTTAAT
GGAATTTATTGTGTTACTCCCCATTAACCAAACAGGTCCCATTCTCCCTT
GCAGAG***ATGAGCTTCCTAGAGCAAGGAGAGAGCCGTTCATGGCCATCCCG***
AGCTGTGACCACCAGCTCAGAAAGAAGCCATGGGGACCAGGGGACCAAGG
CCTCTAGATGGACAAGGCAGGAGGATRTAGAGGAAGGGGGGCCTCCGGGC
CCGAGGGAARGTGAGTTCAAGGCCAGTTCTGGGGAGCTGGGACTGGGGGC
AGTGGGCAGTCCTCAAACCTGGGGCCCGTCTCTGGTCTGGTCCCTCCATA
ACACAGGCACATAACATCATGCAGCC

Fig.2A

GAAACTCTTCTCCCCACA***GACTCCCTCCTGGAGCAGCCTCGGGGGACCTA***
AGCATCAAGGTAGGTGGGGCTGCCCCTGCTCGCGGGCCCAGGCTCTTCTC
CCACCTCCTTTTCTTCCACGTCTTCAGGACCCCAATCTCCCCCACTCCAC
TCGCCTGGCTCTTGTCTTCCTCTCCTTTGCCTTCTTTGTTCCGCTTTGTT
TCTTCTTCCTCCCTCTCCCTCACCTCCTCCCTCTTTCAAAAGAGTAGAGG
GGGCATCTATAGAGTCTGGAGATTGGGACTCTCTTGACTTTCTCGCTTAC
TAGCTGTGTGATTTGTGGCAAATTGCTTCACCTCTCTGAGCTCAGGTCTC
TCGTTAGTAAAACAGGGCTGATAGCCATGCCCTTCGGATAAGATTGCCGT
GAGGGTTGAATGAGAAATTTGTTGGAGGACAAGCCCTTTGAAGCTTCCCA
ATATTAAATATTATTATTAGTAACATTTTAATGGAATTTATTGTGTTACT
CCCCATTAACCAAACAGGTCCCATTCTCCCTTGCAGAG***ATGAGCTTCCTA***
GAGCAAGGAGAGAGCCGTTCATGGCCATCCCGAGCTGTGACCACCAGCTC
AGAAAGAAGCCATGGGGACCAGGGGACCAAGGCCTCTAGATGGACAAGGC
AGGAGGATATAGAGGAAGGGGGGCCTCCGGGCCCGAGGGAARGTGAGTTC
AAGGCCAGTTCTGGGGAGCTGGGACTGGGGGCAGTGGGCAGTCCTCAAAC
CTGGGGCCCGTCTCTGGTCTGGTCCCTCCATAACACAGGCACATAACATC
ATGCAGCC

Fig.2B

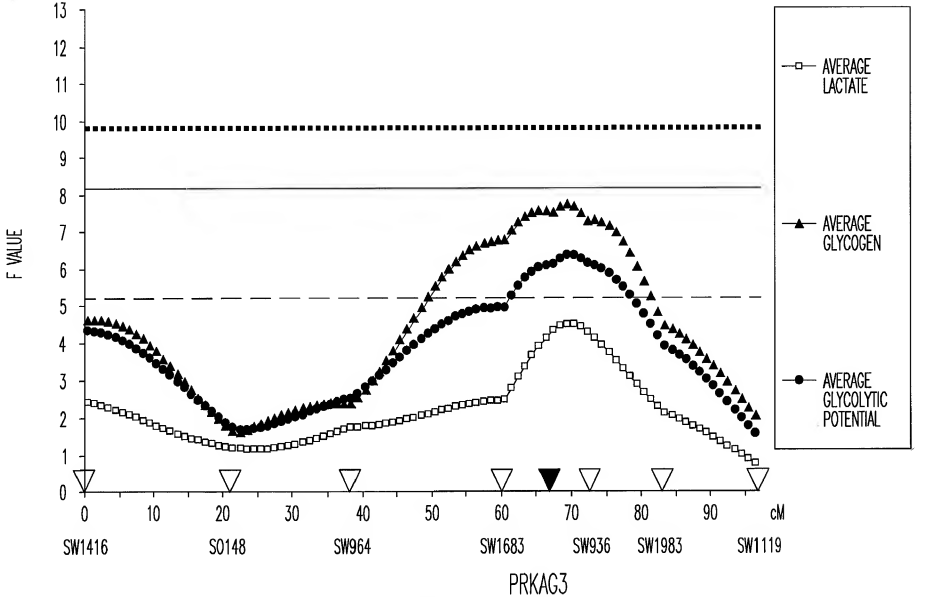
F VALUE
13
12
11
10
9
8
7
6
5
4
3
2
1
0
AVERAGE LACTATE
AVERAGE GLYCOGEN
AVERAGE GLYCOLYTIC POTENTIAL
0
10
20
30
40
50
60
70
80
90
cM
SW1416
SO148
SW964
SW1683
SW936
SW1983
SW1119
PRKAG3

Fig.3A

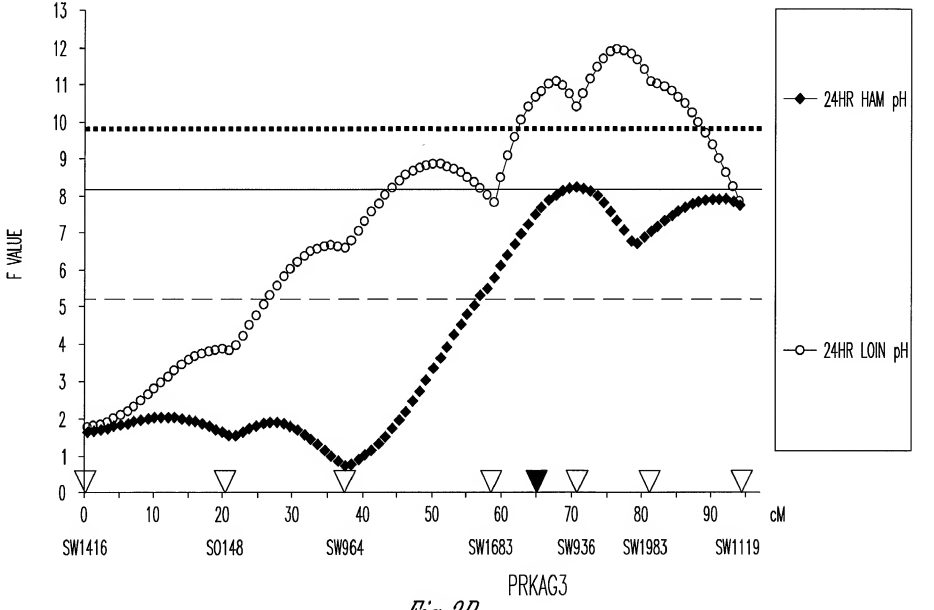

Fig. 3B

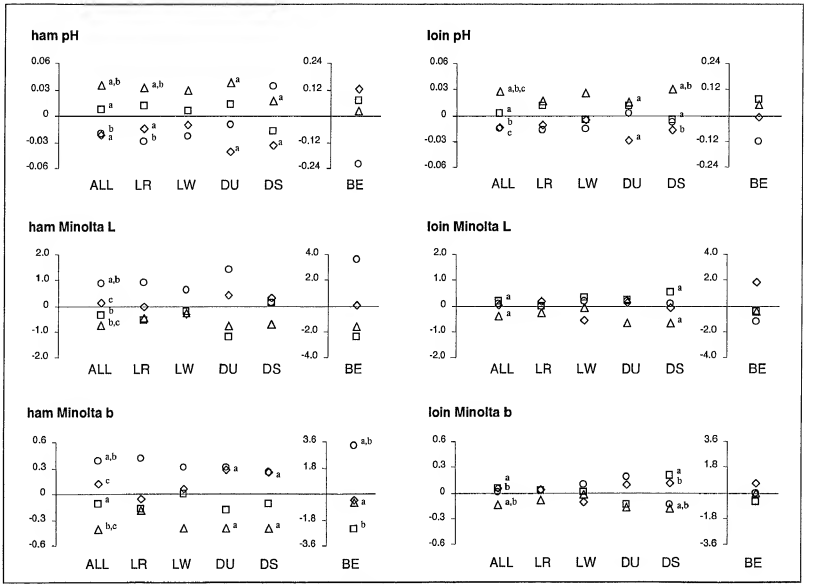
ham pH
loin pH
ham Minolta L
loin Minolta L
ham Minolta b
loin Minolta b
ALL
LR
LW
DU
DS
BE

Fig. 4